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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/074,991 | 02/13/2002 | Lloyd Watts | ANSCP006 | 6884 |

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EXAMINER

MCCHESENEY, ELIZABETH A

ART UNIT PAPER NUMBER

2644

DATE MAILED: 05/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

10/074,991

Applicant(s)

WATTS, LLOYD

Examiner

Elizabeth A McChesney

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,7,20 and 21 is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8-12,14-19 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 2 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2000.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 5, 10 and 16, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "substantially" renders the claim indefinite because it is vague and unclear what the limitation is and in what capacity it is used.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3-5, 8-12, 14-19 and 22-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumgarte US2002/0147595 A1.

Regarding **claim 1**, it is interpreted and thus rejected for the same reasons as set forth above in claim 12. Since claim 1 discloses a method, which corresponds to, the apparatus of claim 12; the method is obvious in that it simply provides functionality for the structure of claim 12.

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Regarding **claim 3**, it is interpreted and thus rejected for the same reasons as set forth above in claim 14. Since claim 3 discloses a method, which corresponds to, the apparatus of claim 14; the method is obvious in that it simply provides functionality for the structure of claim 14.

Regarding **claim 4**, it is interpreted and thus rejected for the same reasons as set forth above in claim 15. Since claim 4 discloses a method, which corresponds to, the apparatus of claim 15; the method is obvious in that it simply provides functionality for the structure of claim 15.

Regarding **claim 5**, it is interpreted and thus rejected for the same reasons as set forth above in claim 16. Since claim 5 discloses a method, which corresponds to, the apparatus of claim 16; the method is obvious in that it simply provides functionality for the structure of claim 16.

Regarding **claim 8**, it is interpreted and thus rejected for the same reasons as set forth above in claim 22. Since claim 8 discloses a method, which corresponds to, the apparatus of claim 22; the method is obvious in that it simply provides functionality for the structure of claim 22.

Regarding **claim 9**, it is interpreted and thus rejected for the same reasons as set forth above in claim 15. Since claim 9 discloses a method, which corresponds to, the apparatus of claim 15; the method is obvious in that it simply provides functionality for the structure of claim 15.

Regarding **claim 10**, it is interpreted and thus rejected for the same reasons as set forth above in claim 16. Since claim 10 discloses a method, which corresponds to,

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the apparatus of claim 16; the method is obvious in that it simply provides functionality for the structure of claim 16.

Regarding **claim 11**, Baumgarte further discloses the filter cascades are of low pass filters [0025].

Regarding **claim 12**, Baumgarte discloses a cochlear filter bank structure, which comprises of a series of filter bank sections with downsamplers inbetween (page 3, [0027]). Figure 2 comprises of a stage 1 consisting of a series of filters (23-1...23-q) wherein the output of the last filter 23-q is then processed by downsampler 22-1. The downsampled signal is processed by stage 2 by a second set of filters. Baumgarte further discloses the filter cascades are of low pass filters [0025].

Regarding **claim 14**, Baumgarte further discloses (see figure 7) by illustration of the locations of the poles and zeros that the slopes are different. Baumgarte discloses that every stage covers a frequency range (for example, 15 poles and zeros), which reads on the filter stages having a different Q from one another.

Regarding **claim 15**, Baumgarte further discloses by illustration, the poles and zeros get closer the unit circle, which causes the steepness of the roll off to increase and provides a higher effective Q. The higher the Q, the sharper the slope, which provides more of a peak and thus the roll off increases.

Regarding **claim 16**, Baumgarte further discloses (see figure 7) by illustration of the locations of the poles and zeros that the slopes are different. Baumgarte discloses that every stage covers a frequency range (for example, 15 poles and zeros), which

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reads on the filter stages having a different Q from one another, and is inherent that the frequency ranges span the human critical bandwidths.

Regarding **claims 17, 18 and 19**, any subband reference would apply, to meet the claimed limitations, where a subband is needed, such as, in any of the well known application listed, which use subbands.

Regarding **claim 22**, Baumgarte discloses a first filter (for example, 23-1) to separate part of the signal into a first output and a second filter (for example, 23-2), wherein the first channel inherently emphasizes a higher frequency than the first (see figure 2). The second set stage or set of filters has a different Q than the first [0043].

Regarding **claim 23**, see Examiner's remarks regarding claim 15.

Regarding **claim 24**, see Examiner's remarks regarding claim 16.

Regarding **claim 25**, Baumgarte further discloses the filter cascades are of low pass filters [0025].

Conclusion

5. Claims 6, 7, 20, 21 are allowed.

6. Claims 2, 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Rigazio et al. (US Patent No. 6,513,004 B1) discloses optimized local feature extraction for automatic speech recognition.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. McChesney whose telephone number is (703) 308-4563. The examiner can normally be reached Monday – Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

EAM *EAM*
April 18, 2003


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600